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INSIDE

The Night Dallas Seemed More Like Afghanistan

On the front lines of the response to another mass shooting, emergency personnel likened the hospital environment to a war zone

It's becoming more difficult by the day to keep up with the mass shootings occurring with increasing frequency in communities across the country. While there is broad agreement that society must confront the underlying catalysts for such violence, emergency providers have much more urgent concerns. In cooperation with emergency medical services (EMS) and law enforcement, emergency providers are the ones communities depend on to stabilize and treat the victims of these incidents, often under chaotic circumstances and with little knowledge of how many patients will present.

That certainly was the case in Dallas on July 7 when a sniper targeted a peaceful protest, shooting 14 people, including five police officers who died from their wounds. While the city has many trauma and emergency care resources to handle such mass-casualty events, this attack took a particularly harsh emotional toll on emergency staff.

WHILE THERE IS BROAD AGREEMENT THAT SOCIETY MUST CONFRONT THE UNDERLYING CATALYSTS FOR SUCH VIOLENCE, EMERGENCY PROVIDERS HAVE MUCH MORE URGENT CONCERNS.

"If you poll almost every ED, you are going to find that in most EDs the nurses that work there or the staff members have relationships with firefighters or police officers. That is very common," explained **Jorie Klein**, BSN, RN, director of the trauma program at Parkland Memorial Hospital, a Level I trauma facility in Dallas. "In addition to that, our trauma medical director and three of the emergency physicians also are medical directors of SWAT teams and EMS

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teams in the community. A lot of the police officers — we have taught classes with them or worked with them, so we were very concerned about their safety."

Teamwork Is Critical

The day of the shooting, Klein had left work when she received a call notifying her that a police officer had been shot and was under treatment at Parkland.

"I got right back in my car and came back to the hospital," she recalled, noting that by the time she arrived there were two injured officers receiving care at Parkland, and staff had no idea how many more victims would present. "I asked permission to put us on what we call 'code yellow, level three.' That means that we have multiple casualties."

Officials opened the command center and the incident commander went mobile with a radio for communications. At the same time, leaders activated hospital security to patrol the area surrounding the hospital and to communicate with the incident commander, Klein explained.

"We are very fortunate to have our own police department that has 100 officers in it, so immediately they were doing what they needed to do," she said. "Then, because [this event] involved [Dallas] police officers, there were probably 70 to 80 officers inside the treatment area at any given time."

The scene was similar at Baylor University Medical Center, another Level I trauma facility in Dallas. **Stephen Burgher**, MD, FACEP, one of the lead emergency physicians on staff the night of the shooting, told reporters that the hospital had no warning that critically injured gunshot victims would be arriving. They just started showing up, many of them transported to the hospital in police cars that were riddled with the markings of gunfire.

"We immediately had multiple patients, which created some bit of chaos as we had to take care of the immediate crisis with the staff that we had on hand," he said.

As soon as staff attended to the initial patients, administrators started planning for additional casualties.

"We started moving patients who didn't need to be in the critical area back, and we started preparing rooms and preparing teams to take care of more casualties," Burgher said. "We got people out of the ambulance bay and trauma area to help with the intake and triage of those casualties and get them to the right areas."

Burgher likened the environment that night to a war zone.

"I am in the Navy and have had a couple of deployments, one to Afghanistan," he said. "Honestly, it hit my mind as we came up and needed to take control of this chaos, this ordered chaos. I felt like I was in Afghanistan."

Burgher noted that the emergency team works together on a day-to-day basis and it drills for mass-casualty events, but the mass shooting that occurred that night is a situation that doesn't happen very often.

"You sometimes wonder what would happen at night with a critical incident with multiple casualties? We got to see firsthand that we worked well together as a team," he observed. "I like to think of it as a team of teams, with multiple teams from our ED team to our trauma [service] team to our other support staff, [including] the ancillary service people, patient transport, and environmental

services. We were all working together as a team. It was pretty amazing."

Biggest Challenge: Facts Unknown

Klein is an experienced hand when it comes to activating emergency procedures. The hospital makes it a point to activate the incident command system frequently. For example, Klein noted that the hospital recently activated the procedures when a portion of the hospital was flooded and patients needed to be moved to other areas. The idea behind this frequent use of the procedures is to make sure that staff members are fully accustomed to them and can assume their roles with little disruption in the case of a major emergency. Despite this thorough preparation, trying to prepare for the unknown on the night of the shooting was still challenging.

"We knew there were officers shot, but we didn't know how many," Klein recalled. "The second thing was we heard there were shooters, but we didn't know if there was one shooter or multiple shooters ... or what [prompted] the shootings. Those are all things that we think about in the trauma center."

Initially, emergency managers focused on making sure people were assigned appropriately and that appropriate resources were in place.

"We [employ] stretcher teams so when a patient goes into a room, there is a team assigned to that patient and that team stays with the patient," Klein explained. "Then the next questions [to address] were how much blood [did we have], how many ORs and ICUs were available, and what did the staffing look like upstairs."

Administrators called in some extra trauma staff and took stock of the personnel they already had on hand, including trauma nurses, ED nurses, several trauma teams, and a number of surgeons. Administrators assembled the burn team as well, Klein noted.

"We told everyone to wait in the OR lounge, and as we needed them we called them out to help us with the patients," she said. "We were good to go. We didn't have any limitations."

There was no management problem related to hospital staff flooding into the hospital to offer help because under "code yellow, level three" activation, off-duty employees are instructed to remain home unless they are called to report for work. That system worked well, Klein said.

EXECUTIVE SUMMARY

Just one month after a mass shooting in Orlando, FL, emergency providers in Dallas were challenged to respond to another incident of gun violence. In this case, a sniper opened fire on a peaceful protest, hitting 14 people, including five police officers who died from their wounds. Emergency and trauma personnel from Parkland Memorial Hospital and Baylor University Medical Center report that their teams performed well, but having worked side-by-side with law enforcement many times, many providers and emergency staff are dealing with a heavy dose of emotional distress.

- With no notice, victims of the shooting began arriving at Baylor University Medical Center in police cars. Emergency personnel noted that some of the vehicles themselves were riddled with bullet holes.
- At Parkland Memorial Hospital, trauma staff immediately activated their incident command to a "code yellow, level three," meaning there were multiple casualties. Not knowing how many shooters there were, the hospital also activated security, using its own 100-person police force to patrol the hospital's perimeter.
- Before the night was over, Parkland treated seven patients from the mass shooting — all of them police officers. But the 108-bed ED also had many other cases to manage that were not related to the mass shooting incident.
- This incident illustrates the importance of including the chaplains of police and fire departments as well as the hospital when preparing and drilling for mass-casualty events, and putting resources in place to help emergency staff deal with distress.

Provider Distress Requires Resources

Before the night was over, Parkland treated seven patients from the mass shooting — all of them police officers. But the 108-bed ED also had many other cases to manage that were not related to the mass shooting incident.

"From 7 p.m. to 7 a.m., we had 17 trauma activations. They were a combination of car crashes, motorcycle crashes, burns, gunshot wounds, and stab wounds," Klein remembered. "These police officers came in [around] the middle of that shift. There were already patients in the area, so what we did is we moved rooms around so that all the officers were cohorted in one specific area.

We did that for the officers, the staff, and the families that were there with them."

While patient volume from the mass shooting did not present difficulties, three of the police officers brought in for care that night died. Providers later related to reporters about how emotionally wrenching it was to lose their law enforcement colleagues.

Klein noted that this mass-casualty event illustrated the importance of putting resources in place to help with such distress.

"We have a trauma psychologist who works with us," she said. "We had our staff meeting [three days after the shooting]. I addressed those issues, and pretty much everybody who was here that night [was required] to see the counselor."

At Parkland, staff have the option of meeting with the counselor as part of a team or individually, and then the counselor refers them to other resources, as needed, or gives them direction on how to process the experience, Klein noted.

The Dallas incident also showed how important it is to include the chaplains of police and fire departments as well as the hospital when preparing and drilling for mass-casualty events, Klein advised.

"You have to integrate them into your planning because those are their officers," she said, noting that she was involved in coordinating with the chaplains the night of the shooting. "You have to learn how to work with them and embrace their roles."

SOME HOSPITALS WILL EXPERIENCE DIFFICULTY DEALING WITH THE CRUSH OF MEDIA AFTER A MASS-CASUALTY EVENT, BUT THE TASK WILL BE EASIER IF HOSPITALS NURTURE THOSE RELATIONSHIPS BEFOREHAND.

Such preparations are easier if a hospital is located in a state with strong regional trauma systems, Klein observed.

"In our region, we have 19 counties, so we work very closely with all EMS agencies and hospitals in this 19-county area," she explained. "My advice is to get out into your region, know who your emergency managers are, and know what your threats are."

Further, it's clear that one of the threats that all hospitals must prepare for is a mass shooting, Klein stressed.

"A lot of people think it is not going to happen to me, but we have enough evidence that active shooters can happen anywhere, in any town of any size," she said. "It needs to be on the hazard vulnerability assessment."

Some hospitals have difficulty dealing with the crush of media after a mass-casualty event. This is understandable, but the task will be easier if hospitals make it a point to nurture those relationships beforehand, Klein observed.

"Learn to work with the media. Do it on a daily basis so that when you have a big [event] you have good relations," she said. ■

SOURCES

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Tragedies Provide Learning Opportunities

With mass-casualty events on the rise, a new emergency medicine-driven task force addresses training, operations, and clinical care

Picking up on and quickly disseminating the lessons learned from the emergency responses in Dallas, Orlando, and in places that responded to mass-shooting events is just part of the mission of the new High Threat Task Force assembled by the American College of Emergency Physicians (ACEP). The panel also is aiming to "drive the research agenda to provide evidence for responsible public policy, training, and operational response decision-making," explains **David Callaway**, MD, the co-chairman of the task force and director of operational and disaster medicine at Carolinas Medical Center in Charlotte, NC.

"For the past 10 years or so, we

have seen this increasing frequency and complexity of domestic attacks and trauma, and emergency medicine physicians have been on the front lines for every one of them, whether that is as EMS medical directors, at community hospitals as first receivers, at trauma centers, or even at the public policy level with different professional organizations," Callaway says. "Emergency medicine providers have been leading the charge in how we train and how we respond, but the efforts have been disparate."

Consequently, the task force is hoping to unify all these efforts, iron out any inconsistencies, and provide a stronger national platform, Callaway explains. Further, the panel aims to create "a comprehensive strategy for ACEP to address trauma care from the point of injury through definitive care in high-threat emergencies to eliminate potentially preventable mortality," he says.

While the idea for the task force was introduced in November 2015, work shifted into high gear immediately after the mass shooting in Orlando, FL, on June 12.

"The key thing is that we have gotten broad stakeholder buy-in for this concept that there is something different about how we provide care in these dynamic active-threat environments, and that the threat actually impacts what we do and when we do it," Callaway says. "That buy-in has been the biggest key step because [stakeholders] have appointed respected leaders from their organizations [to the panel]. That gives the task force the political capital to move forward with some of our agenda items."

Establish a Databank, Guidelines

In the short term, Callaway explains that the task force intends to create a structure for rapidly acquiring, analyzing, and disseminating lessons learned after each of these mass-shooting events. Further, the panel hopes to use the public interest in these matters to address what Callaway calls one of the biggest gaps: the lack of evidence-based guidelines for how emergency personnel respond to these events.

"The biggest problem we have right now is that we don't have a preventable death analysis of these events," Callaway says. "The military realized this in 2003 and set up the joint trauma system, so when someone is wounded in combat and they make it to a hospital, [he or she] is entered in the joint system and then all the interventions that are done are tracked as well as what the injuries were and whether the patient survived ... so [the military] can basically see who survives and who does not and why. And we have not done that in a civilian setting for these events."

Given that a national trauma databank already exists with this type of data, physically assembling such a database does not pose much of a challenge, according to Callaway. However, he notes there still are barriers related to the litigation and prosecution of these events at the state level.

"States have different laws about who can access autopsy data, and this significantly restricts the ability to know what type of interventions we should train people in," Callaway observes. "So one of the first things that will come out of the task force is a joint call-to-action to establish this databank, and to perform a preventable death analysis so we can really understand what is going on and provide good advice to [make] public policy, perform equipment purchases, and to conduct training, education, and operations nationwide."

Put Added Focus on Situational Awareness

While the incident command system is an important structure, Callaway observes that the system originally was designed to fight wildfires, not events that last five to 22 minutes.

EXECUTIVE SUMMARY

With the increasing frequency of mass-casualty events, the American College of Emergency Physicians has assembled a High Threat Task Force to look for ways to improve the emergency response to these events. The panel intends to focus on training and operations, but the ultimate goal is to find ways to eliminate preventable deaths.

- The panel intends to standardize and unify improvement efforts that have thus far been disparate.
- The co-chairman of the panel says one of the biggest gaps is the lack of evidence-based guidelines for how emergency personnel should respond to mass-shooting events.
- Noting that the incident command structure was created for fighting wildfires, the co-chairman of the task force notes that mass-shooting events require a more dynamic leadership response.

The Importance of Emergency Preparedness

While national organizations and policymakers study what they can do to improve the response to mass-casualty events, hospitals around the country are scrambling to integrate the latest expert advice from these events into their operations, but it's a continuing challenge, observes **Karen Doyle**, MBA, MS, BSN, senior vice president of nursing and operations in the R Adams Cowley Shock Trauma Center at the University of Maryland Medical Center (UMMC) in Baltimore.

"Hospitals get little to no funding for preparedness, so conversations certainly should occur, and we do conduct mass-casualty exercises," Doyle notes. "We conduct active shooter training through our emergency management committee, we talk about lessons learned, and then we try to incorporate what our colleagues have learned across the nation into those exercises."

At UMMC, there is a formal process for implementing improvements in the way the hospital prepares for mass-casualty events. "All our plans come through the emergency management committee, which every hospital needs to have according to Joint Commission standards," Doyle explains. She observes that the catalysts for such changes often come from professional conferences.

"Someone will present a situation, and we will make sure we garner the information from there," Doyle says. "Then we take that information, whether it is publicized or whether [a member of our staff] has attended the conference, and incorporate it into our disaster [approach] based on what we think we need to bolster in our plans."

The hospital has not yet had to deal with a mass shooting, but it has dealt with mass-casualty events, and the first order of business is always making sure the resources required to handle the situation are available, Doyle explains. "We had riots in Baltimore ... and we certainly had a lot of patients descend on us," she explains. "Making sure that you garner your resources, get them to the right place, and that you triage appropriately is first and foremost."

"Once that aspect is under control, managing the environment outside the hospital requires planning, which can be quite difficult," Doyle observes. "The press, the people, the rumors, and all the communications that exist — those are things that become very complicated. Delivering care is probably the easiest piece of it."

As shooting incidents have escalated, UMMC has increased its preparations for this type of event. "We do active shooter training, and we have incorporated escalation techniques into the training of many of our staff," Doyle notes. "We also have employed a different level of security to monitor the perimeter of our hospital."

Further, there is a much greater focus on workplace violence at UMMC. The hospital installed panic alarms that employees can use when they feel threatened and hired a security consultant as part of an effort to improve the safety culture. "It's a huge issue. We have done a lot of work in our institution, and we have a lot more work to do," Doyle admits. "I don't feel like we are ever done, but we have a heightened sense of awareness."

Doyle feels fortunate that she works in a major medical center in a city where resources are plentiful, but she worries about smaller community hospitals. "We can partner with Baltimore City Police and with our rehab centers," she explains. "Other places that are out there in these rural areas really struggle. Critical access hospitals have very few resources around them." ■

"The average active shooter event lasts about 12 minutes, so it is nearly impossible to stand up an incident command and have it functional in that amount of time," he explains. "These events require much more of a dynamic leadership response."

Callaway makes clear that he is not suggesting replacing the incident command structure. In fact, he emphasizes that all emergency personnel must be trained in incident command procedures. However, he asserts that they also must understand when and why they need to stray from those procedures at times.

"We saw this in Aurora, CO [on July 20, 2012] when law enforcement realized that the ambulances couldn't get into the theater [where a mass shooting had occurred] because there were so many people, so law enforcement transported 75% of the first casualties in the first 30 minutes," Callaway says, noting that the same thing happened in the aftermath of the mass shooting in Orlando. "They had the situational awareness to realize they were only three blocks from Orlando Regional Medical Center, and so law enforcement literally put people in the backs of pickup trucks and drove them to the trauma center."

Such a response undoubtedly saved lives, but it would not have been appropriate if the medical center had been a 40-minute drive away, Callaway notes.

"It is really hard to create these rigid response protocols that say cops should always transport people or cops should never transport people," he notes. "These events cross over between operational decisions and medical decisions, and they require the integration of medical and non-medical personnel

at a level and at a speed unlike any other event."

Develop New Strategies for Training, Mitigating Risk

The ultimate goal of the task force is zero preventable deaths, Callaway says.

However, to get there he stresses that people must understand that the current standard of a no-risk environment no longer exists.

"It is not politically or morally acceptable to have someone die in a cafeteria after a shooter has been killed because you are scared about IEDs [improvised explosive devices]. It is completely, operationally reasonable to be concerned about those IEDs, and you have to be concerned, but it is not acceptable to delay action and to not get the casualties out fast," he explains. "In these [mass-shooting] events, you have to assume more risks, and so from our standpoint, if we are going to ask people to assume more risk, we have to give them strategies for how to mitigate the risk."

To accomplish the twin goals of mitigating risk and having zero potentially preventable deaths, the task force will be focusing a lot of time and energy on training and operations.

"Hospitals are always wary to 'disrupt' daily operations to prepare for a crisis. This needs to change," Callaway argues.

What also must change, according to Callaway, is the propensity by governmental organizations to provide funding for gear and equipment, but not so much for training.

"It is much easier to provide quantitative data on the number of ballistic vests provided than it is to show evidence of impact from training police, EMS, fire, and hospitals in terrorism response," he says. "Risk can be mitigated with a whole community approach to the response. If all responders are trained in the same system with the same language and the same operational parameters, they operate as a living network and are able to be empowered decision makers."

IN ONE WAY, THE COUNTRY HAS BEEN FORTUNATE THAT MOST OF THESE MASS-SHOOTING EVENTS HAVE OCCURRED IN URBAN AREAS WHERE EMERGENCY RESOURCES ARE CLOSE AT HAND, BUT PREPARATION IS CRITICAL.

Establish Best Methods for Data Collection

With many different community pieces involved, why should emergency medicine be the main driver for improvement?

"The vast bulk of prehospital medicine is [overseen] by emergency medicine physicians, but then our day-to-day job is to be that bridge between the community and the prehospital environment and the hospital," Callaway says. "Many of the physicians who are on the task force have been involved in some of these events over the years, from Virginia Tech to Sandy Hook, and some [have] military [experience] as well."

The task force already has begun discussions with clinicians who were involved in the emergency responses to the most recent shootings in Orlando and Dallas.

The task force wants to hear about the lessons learned at these events, but Callaway stresses that the panel also wants to figure out the best way to gather this information.

"Our goal is to, in a rapid and sensitive fashion, understand what happened and understand what could have been done better so that we can educate — not for retribution," he stresses. "Then we need to make sure we get the information out to the rest of our providers because we know that we are seeing an escalation in these events, and shorter times between events."In one way, the country has been fortunate in that most of these mass-shooting events have occurred in urban areas where emergency resources are close at hand, but Callaway emphasizes that preparation is critical.

"Luck has been on our side, but the more prepared you are, the luckier you get," he says. "We need to take every one of these events that has happened, and the key is to look at them and pretend that they happened in your city. We need to wargame these events

and then wargame the worst-case scenarios." ■

SOURCE

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Optimal Teams and Performance Feedback Drive Improvements in Processing Measures

To get staff buy-in, ED administrators note personnel should understand the reasoning behind performance initiatives

Maintaining high-performance is never easy in a busy ED, especially when it's in a Level I trauma facility that treats a steady stream of high-acuity patients. However, data from the Emergency Department Benchmarking Alliance (EDBA), a nonprofit organization that collects and maintains a database on ED performance metrics, suggests that ProMedica Toledo Hospital in Toledo, OH, has been able to hit the mark on processing measures year after year.

"This ED has done a tremendous job over the years in processing patients very effectively in a small-sized ED," observes **James Augustine**, MD, FACEP, the vice president of EDBA and director of clinical operations at US Acute Care Solutions. "Last year, the hospital's ED improved their process even further, and now has the best performance in an ED with more than 100,000 patients annually that I have ever seen in our EDBA data."

For instance, the hospital reports that the median door-to-bed time in its ED is 23 minutes, and the median bed-to-physician time is eight minutes. Further, the median length of stay for all ED patients stands at 121 minutes, and hospital administrators note that the ED's leave-without-being-seen (LWBS) rate tends to hover around the 1% range, far below the national average.

What has the hospital done to achieve and sustain such performance metrics? There have been a number of concrete steps, and ED leaders note they are a data-driven group, with a firm commitment to providing staff with regular feedback on their collective and individual performance metrics. However, ED leaders also acknowledge that to get staff to buy in to performance initiatives, they have to fully understand the reasoning behind such efforts, and they must have both a game plan and the necessary resources to succeed.

EXECUTIVE SUMMARY

The ED at ProMedica Toledo Hospital, a Level I trauma facility in Toledo, OH, has been able to chart impressive metrics on patient processing measures year after year. Administrators credit an overhaul in their triage process, a comprehensive approach to providing staff with regular feedback on their performance, and a system that relies on optimally sized teams to deliver care. Department leaders are hoping to boost patient satisfaction scores with an initiative that will leverage champions, fresh metrics, and a new mission statement to highlight the importance of the patient experience.

- Hospital administrators report that the median door-to-bed time in the ED is 23 minutes, and the median bed-to-physician time is eight minutes.
- The median length of stay for all ED patients stands at 121 minutes, and hospital administrators note that the ED's leave-without-being-seen rate tends to hover beneath 1%, far below the national average.
- The ED uses a zone system that can adjust from two to five zones, depending on patient volume. The charge nurse is responsible for assigning patients to specific zones for care.

Empower Nurses

Beth Estep, MSN, RN, CEN, director of the ED at ProMedica Toledo, credits much of the department's improvement in processing times to an overhaul of the triage process.

"We all know our front door is critical to us," she says. "The whole goal is to get patients to the provider

as soon as we can."

Consequently, the minute a patient arrives in the ED, emergency personnel engage with the individual to determine why he or she is there.

"We do have immediate bedding here, so if we have beds open, we do a quick registration just to get some quick information and numbers, and then we immediately get the patient back to a bed so that we can triage him or her in the back," Estep notes. "We can get a whole heck of a lot of things going on in the back along with the most important thing: getting the provider in to see the patient for that medical screening exam."

When the ED is operating at full capacity, and there are no open beds, staff members begin the triage process out front.

"We have preemptive guidelines that we work on so that we can be sure to initiate some of the testing that is within the scope of the nurses out front. This is done so that by the time the patient arrives in the back, we have some of the items completed for the providers," Estep explains.

Specifically, the hospital follows guidelines established by the Ohio Board of Nursing, which empowers nurses to order certain labs, X-rays, ECGs, and urine tests, Estep observes.

"When the providers see the patients, they are not starting from step one," she adds.

Provide Ongoing Feedback

Providers also are regularly apprised of their patient processing times, explains **Brian Kaminski**, DO, CPPS, medical director of the ED.

"We provide feedback on a lot of data points," he observes. "We look at overall LOS [length of stay], bed-to-physician time, time to disposition, and disposition until removal through the system. We categorize these, and we really just rank and stack our physicians so that everybody gets the data on all the physicians sent to them."

UNDER THE ZONE SYSTEM, INSTEAD OF PHYSICIANS PICKING UP THE NEXT AVAILABLE PATIENT, STAFF MEMBERS TRIAGE PATIENTS TO A SPECIFIC ZONE THAT OPERATES ALMOST LIKE ITS OWN SMALLER ED WITHIN AN ED.

Physician leaders then focus on the physicians who work at both ends of the spectrum.

"If on one data point they are a standard deviation or more to the good, we will use them as an example, and sometimes pair them with some of our less productive or less efficient physicians so they can learn from the productive ones," Kaminski notes. "At the same time, in a more private manner, we will coach, educate, and provide additional resources to those folks who are a standard deviation or more to the negative side."

This steady stream of feedback has become part of the culture, Kaminski explains.

"This is an item of importance. We talk about it at every department meeting, so it is something that is always high on the radar," he says.

Further, Kaminski notes that the ED physician group has hired an executive director with a business background to take charge of the data collection and feedback process.

"He has an MBA, and a big part of his role is helping deliver that data to our providers, and helping mentor the ones that are low on the productivity side to become better performers," Kaminski explains.

Devise Optimally Sized Teams

From an operational standpoint, ED leaders look closely at volume curves so that staff schedules are in accordance with anticipated demand for a given period. Further, Kaminski credits the ED's switch to a zone system in 2002 as a particularly effective method of boosting productivity.

"The staffing model [used to have] all the doctors just kind of floating around and just picking up the next patient," he explains.

However, under the zone system, instead of physicians picking up the next available patient, staff members triage patients to a specific zone that operates almost like its own smaller ED within an ED, Kaminski explains.

"The physician doesn't have direct control of the patients who are triaged to that area. That is done by the charge nurse," he says.

Under the zone system, when a bed is open and available, the next patient goes to that zone, and ED lead-

ers know which physician is responsible for the patient because he or she is responsible for the entire zone.

"Physicians can't delay or wait to see if someone else will pick up the patient. He or she is theirs from the moment the patient goes into a room," Kaminski explains. "It is not always easy to operate this way, but we think from an efficiency standpoint putting that flow process in the hands of the charge nurse, who has great visibility of the department, is where the decision point ought to be."

With experience working in and witnessing the operations of large EDs, Kaminski notes that one of the strategies often utilized is to view the entire ED as one unit that operates as a big team, but that is not the method he favors.

"The approach we have taken is really centered more around the idea that once teams reach a certain size they tend to be more dysfunctional, so when we staffed and set up the model we are currently using ... we really wanted to create different teams of optimal sizes," he explains. "We generally refer to two different zones, but depending on the time of day, we can actually have five different zones."

For example, there is an express care area and a pediatric area that both operate independently, and then the main ED is divided between zone A and zone B, Kaminski explains.

"Then, when we reach a volume peak in mid-afternoon, we actually create an additional zone," he says. "So during the peak hours of the day, we have five independent teams working within the larger ED, and during the lower volume parts of the day, we have two teams, so we flex and bend our staffing according to the volume, but with the idea that we want to have teams with a finite number of team members on each team so that everyone is performing to their maximum capability."

Another strategy that helps with staffing: ED leaders try to hire and recruit people who have experience working in high-volume settings.

"If we have candidates coming in that have never done that before, it might not be the best environment for them," Kaminski notes. "We tend to steer away from them and hire and recruit people who are more comfortable in a [higher-intensity] environment."

WHILE ELECTRONIC MEDICAL RECORDS ARE A WONDERFUL TOOL, THEY HAVE THEIR LIMITATIONS ... ILLUSTRATED IN DALLAS DURING THE EBOLA SCARE IN 2014 WHEN A PATIENT'S TRAVEL HISTORY ... WAS NOT EFFECTIVELY COMMUNICATED FROM TRIAGE TO THE REST OF THE DEPARTMENT.

Nurture Relationships

The ED has made relationship-building between physicians and nurses a priority, and this has paid dividends in improved communications and operational efficiency, Estep observes. The ED has reached these goals, in part, through the zone system and strategic scheduling.

"The physicians work a seven-days-on-seven-days-off type of concept, but when they are here and they are assigned to zone A or zone B, they are working with the same set of nurses, so they build relationships with them and dialogue with them," Estep notes.

Further, when new nurses come on board, ED leaders make sure they are introduced to the physicians, and their pictures are posted so that everyone knows who is coming on board. Estep adds that the night supervisors play a key role in making sure that incoming nurses are well-integrated into the culture of the ED because this is where new staff generally first come on board.

"They are doing team-building exercises two or three times a week, and they include the physicians," Estep says. "That really does help [the physicians and nurses] bond."

Beyond efficiency improvements, ED leaders note they are particularly focused on matters of safety.

"We put every one of our employees through error-prevention training, which is giving them tools and techniques in high reliability," Kaminski explains. "One of the fundamental core values in error prevention training is communicating clearly, and we give people communications techniques to use to not only communicate effectively, but also to recognize high-risk situations ... and how to escalate when something is important and there is a concern."

Kaminski adds that while electronic medical records (EMR) are a wonderful tool, they have their limitations. This point was illustrated in Dallas during the Ebola scare in 2014 when a patient's travel history, which should have been a red flag, was not effectively communicated from triage to the rest of the department.

"Not everybody reads every piece of information in the EMR as they are seeing and treating patients, so error-prevention techniques are designed in a way that our hope is that we would be able to see a situation like that," he explains.

Learn From Others

While ED leaders are proud of the process improvements they have achieved, they still see plenty of opportunities for further gains.

"Our processes aren't perfect. We still have significant frustration with some of the patients that we do board, and we would like to do that better," Kaminiski admits.

Another target is the ED's performance on patient satisfaction surveys. Those figures tend to be average, Kaminski admits.

"We've got to focus on the patient experience," he says. "We've developed a mission statement, and we have developed a pledge that we are going to have all providers and employees sign. We have goals and metrics from the safety, quality, and satisfaction standpoint that we are going to track."

Kaminski adds that ED leaders are in the process of recruiting champions and coaches to launch the initiative, with a target date for implementation in early 2017.

With all the recent mass-casualty events in mind, Estep is determined to engage the entire hospital in more drills to prepare for such events. That is the key recommendation she has gleaned from hospital administrators in areas that have recounted their experiences in managing mass-shooting incidents.

WITH ALL THE RECENT MASS-CASUALTY EVENTS IN MIND, ESTREP IS DETERMINED TO ENGAGE THE ENTIRE HOSPITAL IN MORE DRILLS TO PREPARE FOR SUCH EVENTS.

"It isn't just about the ED drilling because you need help," she says. "You need to be able to have everyone deployed."

On any of these issues, the key to getting staff to go along with a new approach is to embrace it and model it yourself, Estep says.

"[Staff members] are an extension to us, and if they believe in what we do and they know that we are walking the walk ... they will go out there and do everything they can to man the department in any aspect of great care and great service," she observes. "The key here is that it always starts with us." ■

SOURCES

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CME/CE OBJECTIVES

After completing this activity, participants will be able to:

1. Apply new information about various approaches to ED management;
2. Discuss how developments in the regulatory arena apply to the ED setting; and
3. Implement managerial procedures suggested by your peers in the publication.

COMING IN FUTURE MONTHS

- Why first responders and emergency providers must standardize their care processes for heart attack victims
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- Where "micro-hospitals" fit in emergency care

ED MANAGEMENT®

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CME/CE QUESTIONS

1. **Responding to the increasing frequency of mass-casualty events, the new High Threat Task Force hopes to use public interest in these events to address one of the biggest gaps in:**

   a. the lack of specialized gear and equipment needed to optimize emergency response operations.
   b. the lack of evidence-based guidelines for how emergency personnel respond to these events.
   c. a shortage of emergency physicians with added training in trauma resuscitation.
   d. All of the above

2. **The average active shooter event lasts about 12 minutes, so it is nearly impossible to stand up an incident command and have it functional in that amount of time. As a result, these events require much more of:**

   a. an individualized response.
   b. a community-driven response.
   c. a dynamic leadership response.
   d. a pre-planned approach.

3. **The switch to a zone system in the ED at ProMedica Toledo Hospital has led to:**

   a. a boost in productivity.
   b. improved provider morale.
   c. increased patient satisfaction.
   d. lower costs.

4. **Under the zone system, the physician doesn't have direct control of the patients who are triaged to his or her zone. That is done by:**

   a. the medical director.
   b. the ED director.
   c. the charge nurse.
   d. the registration staff.

ED ACCREDITATION UPDATE
COVERING COMPLIANCE WITH JOINT COMMISSION STANDARDS

Best Practices, Investments Needed to Communicate Effectively with LEP Patients

Experts note the emergency setting is 'a cauldron of difficulties' when it comes to communicating effectively with limited English proficiency patients

In May, the Department of Health and Human Services' (HHS) Office of Civil Rights issued a final rule that bans hospitals that receive federal funds from discriminating against transgender people, the disabled, and people with limited English proficiency (LEP). (*More information about this rule is available at: http://bit.ly/1YCYEbl.*) In issuing the rule, HHS Secretary **Sylvia Burwell** noted that it was a key step toward realizing equity within the healthcare system.

Among other things, the rule clarifies what accommodations hospitals must make to meet the needs of LEP patients, specifying, for example, what makes an interpreter qualified. In fact, meeting the needs of LEP patients has long been an issue of concern for The Joint Commission (TJC). In May 2015, TJC issued a report noting that 20% of the U.S. population speaks a language other than English at home, and that approximately 25 million people, or 8.6% of the population, can be defined as LEP. Further, the report noted that by 2021, roughly half of all newly insured people in the United States will be minorities who are less likely to speak English. (*More information is available at: http://bit.ly/2aMdfjF.*)

What makes these data points noteworthy is the reality that LEP patients are at higher risk for adverse events than patients who are fluent in English. There is evidence that a growing number of hospitals are beginning to realize that the kind of investments needed to accommodate LEP patients may pale in comparison to the tab for maintaining the status quo.

> THE JOINT COMMISSION REPORTS 20% OF THE U.S. POPULATION SPEAKS A LANGUAGE OTHER THAN ENGLISH AT HOME, AND THAT APPROXIMATELY 25 MILLION PEOPLE CAN BE DEFINED AS LEP.

Experts agree that there is plenty of room for improvement in the way hospitals endeavor to meet the needs of LEP patients. **Joseph Betancourt**, MD, MPH, director of the Disparities Solutions Center at Massachusetts General Hospital in Boston, explains that one of the biggest challenges is that many hospitals across the country don't have even a basic foundation in place for communicating with LEP patients.

"There still are many hospitals that don't have a dedicated interpreter service or, quite frankly, a real plan to effectively manage language barriers in healthcare delivery," he observes.

These hospitals still rely on family members of patients to act as interpreters or hospital workers who may have some knowledge of the patient's native tongue, but no proper training in medical interpreting, Betancourt notes.

"If we go to the next level, we do have some hospitals that have invested in dedicated interpreter services and who do have telephonic vendors in place, but their ability to use them effectively is hampered by the fact that they really haven't built the systems, nor have they trained their caregivers on how to use these services efficiently," he says.

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For example, Betancourt notes that a provider may be well aware that the hospital has a dedicated interpreter service, but pressed for time, he or she wil nix the idea of waiting for an interpreter to come down, and just press forward. In fact, this is a particularly common scenario in the fast-paced emergency setting.

"The ED is a real cauldron for difficulties in these areas. There is no doubt that individuals in the ED are working in a high-stress, high-risk environment," Betancourt explains. "These individuals need to move fast and need to get people triaged, so if the [interpreting] system isn't built to support the emergency service in a timely fashion, it just won't be used."

Consider Potential for Errors

However, providers should understand that shortcuts of this nature can produce severe consequences. **Glenn Flores**, MD, the distinguished chair of health policy research at the Medica Research Institute in Minnetonka, MN, describes the case of a 6-month-old infant who presented to the ED with vomiting and diarrhea.

"The triage history given by the mother was interpreted by the boy's 12-year-old sister, and no medical interpreter was requested. The sister stated that the patient had four dirty diapers and three episodes of vomiting that day," Flores explains.[1]

The boy was triaged to a non-urgent level of care where the documentation stated that he had vomited seven times that day with no diarrhea.

"The boy was discharged shortly thereafter with a diagnosis of vomiting and with instructions only in English for rehydration solution by mouth," Flores notes. "Three days later, the boy returned to the ED in severe distress with new onset of bloody stools. He was admitted to the hospital and died six hours later from septic shock."

In another case, a 12-year-old paraplegic female presented to a children's hospital ED with shortness of breath, fever, a urinary tract infection, and tachycardia. She spoke minimal English, and her mother only spoke Spanish, Flores explains.

"An interpreter was not available until three hours after [the patient's] initial presentation. Neither telephone nor video interpretation was considered by staff," he says.[2]

Flores explains that it took 90 minutes for the medical staff to figure out that the patient recently had traveled to Mexico where she had been diagnosed with a renal abscess. He notes that 30 minutes after the interpreter's arrival, the patient went into cardiac arrest. She died 23 minutes later.

"The autopsy revealed bilateral septic pulmonary emboli, a left leg thrombosis and sepsis as causes of death," Flores says.

These are just two cases, but Flores contends that they are emblematic of what can happen when effective interpretation services are not available or leveraged when LEP patients present for care.

"Substantial scientific evidence documents that optimal communication, patient satisfaction, outcomes, resource utilization, clinical research quality, and patient safety occur when LEP patients have access to adequate language services," he says.

Flores stresses that using ad hoc interpreters — whether they are family members, people in the waiting room, untrained ED staff, or even a primary caregiver who has limited English proficiency — is no substitute for using a trained medical interpreter. Further, he warns about the overconfidence that some healthcare providers have regarding their own fluency in the patient's primary language.

EXECUTIVE SUMMARY

Resource-challenged hospitals have long struggled to meet the needs of patients with limited English proficiency (LEP), often relying on ad hoc interpreters to communicate with these individuals. However, such shortcuts carry risks, and with the increasing diversity of the population, there is a new push by the Department of Health and Human Services' Office of Civil Rights and other organizations for hospitals to make the investments needed to ensure effective communications between providers and LEP patients.

- Experts note that many hospitals across the country lack a basic foundation for communicating with LEP patients.
- Many hospitals with dedicated interpreter services haven't built the systems or trained staff to use these services effectively.
- Experts advise ED providers to collect and track English proficiency data on all patients, and provide trained medical interpreters to all LEP patients and families.
- Printed materials, such as discharge instructions and prescriptions, also must be translated into a patient's native language, and these materials must be reviewed with the patient with the help of a translator.

One other shortcut providers must avoid: using Google Translate for medical interpretation.

"Google translate can be grossly inaccurate in medical encounters, placing patients at significant risk for harm," Flores warns. "Google Translate specifically states that it should not be used in safety-critical circumstances. It should never be used to replace a trained, professional medical interpreter."

Address Post-discharge Care

Communicating effectively with LEP patients extends beyond interactions that take place while such patients are in the hospital. They also need to understand written instructions, an area ripe for improvement, according to Betancourt.

"It is a particularly huge issue because on top of the fact that there are probably not the best systems in place to support LEP patients, we have a real dearth of patient materials in different languages," he says. "So these individuals are getting some level of instruction with the help of an interpreter [while they are in the ED], but then if they have any questions, they are really in a tough spot. They have no one to call. They don't really have a good navigator in place."

In fact, Betancourt and colleagues highlighted this issue in a report they completed for the Agency for Healthcare Research and Quality, in which they identified several high-risk scenarios in which language barriers posed a significant risk of a medical error. (*The entire report is available at: http://bit.ly/OcrakX.*)

"ED care was one of those high-risk scenarios because people are leaving with instructions that they often don't understand ... and that can lead to a whole series of errors," Betancourt observes.

Some hospital systems are creating multilingual call lines or other innovative solutions so that LEP patients can access the help they need in a language they understand when they have questions about their care post-discharge, but the need for such solutions is only growing with the increasing diversity of the U.S. population.

> "SUBSTANTIAL SCIENTIFIC EVIDENCE DOCUMENTS THAT OPTIMAL COMMUNICATION, PATIENT SATISFACTION, OUTCOMES, RESOURCE UTILIZATION, CLINICAL RESEARCH QUALITY, AND PATIENT SAFETY OCCUR WHEN LEP PATIENTS HAVE ACCESS TO ADEQUATE LANGUAGE SERVICES."

Betancourt notes that an increasing number of hospitals are getting the message.

"There is greater attention on issues related to patient safety, and the research clearly tells us that minorities and patients with LEP suffer more medical errors with greater clinical consequences than their white counterparts," Betancourt explains. "So if you are a hospital and you care about patient safety, you need to turn your attention to those issues."

Weigh Costs/Benefits

Another force pushing hospitals to improve in this area is the move toward value-based purchasing, which places a premium on caring for patients who frequently utilize the system or are high-cost, Betancourt observes.

"What we understand about these patients is that they are quite vulnerable, and language barriers can play a very significant role," he explains. "If you are getting paid on a value-based contract whereby you are compensated on your care of a group of patients with heart failure or a group of patients with diabetes ... then it really behooves you to make investments to address language barriers to avoid absorbing costs that come from patients misunderstanding."

Letting this issue slide has other financial ramifications as well, Betancourt warns.

For example, he describes the case of an LEP patient who presents to the ED with head pain, and there is no interpreter on site who can translate the patient's story.

"The provider will just send the patient to get a CT scan because he or she needs information," Betancourt explains. "Think about the cost to the healthcare system for that unnecessary CT scan when, in fact, an interpreter, for a fraction of the cost, could have allowed that ED physician to do his or her job, get a really good history, and figure out that the issue was sinusitis and not a

subarachnoid hemorrhage."

Flores suggests ED administrators and providers push for all states to provide third-party reimbursements for interpreter services for LEP patients.

"Currently, only 12 states and Washington, DC, do so, but it is relatively simple to achieve," he explains. "The state legislature just has to approve interpreter services being a covered service under Medicaid. By not doing so, states are missing out on millions of dollars of federal Medicaid/CHIP [Children's Health Insurance Program] matching funds that could be flowing to them."

Implement Best Practices

To find out whether your own ED is communicating effectively with LEP patients, Flores directs ED managers to complete a two-step process. Managers should consistently collect and record in the electronic medical record (EMR) whether patients speak a language other than English at home. If yes, then record what that language is and how well the person speaks English: very well, well, not well, or not at all.

"Any response other than 'very well' classifies this person as LEP," Flores notes, explaining that these questions come straight from the U.S. Census Bureau. "Monitor relevant outcomes for LEP patients, including wait time in the ED, time spent in the ED, hospital admission rates, medical errors, patient safety events, and mortality rates."

How might ED clinicians take steps to improve LEP communications in their own work settings? It's a challenge without supportive healthcare systems, Betancourt acknowledges.

"I would say the best thing ED physicians can do is advocate in their own systems to support interpreter services and ways to manage language barriers," he says.

Emergency leaders also should consider implementing a host of best practices that can ensure that communications with LEP patients are optimal, Flores explains. He suggests the following steps:

EMERGENCY LEADERS ALSO SHOULD CONSIDER IMPLEMENTING A HOST OF BEST PRACTICES THAT CAN ENSURE THAT COMMUNICATIONS WITH LEP PATIENTS ARE OPTIMAL, FLORES EXPLAINS.

- Collect English proficiency data on all patients, using the simple questions from the U.S. Census Bureau described above.
- Record LEP data as a permanent and prominent part of the EMR.
- Provide trained, professional medical interpreters or bilingual providers to all LEP patients and families.
- Post multilingual signage throughout the ED, imaging, and lab departments and other areas frequented by emergency patients.
- Provide professionally translated prescriptions, discharge instructions, and any other handouts in a patient's primary language, and review these materials with the patient with the assistance of a medical interpreter.
- Identify ED clinicians and staff who speak languages other than English, test their proficiency in these languages, and provide additional training to those who are not fluent.
- Create a database of all bilingual providers and staff to be used as a resource for LEP patients and families.
- Refer LEP patients and families to resources that can help them learn English. ■

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